


Biographical Sketch

	Name: Peter Lasch	Position Title: Head of division <i>Proteomics and Spectroscopy</i> at the <i>Centre for Biological Threats and Special Pathogens</i> (ZBS), Robert Koch-Institut (RKI), Berlin
	Degree: Dr.	

A — Education / Training

Institution and Location	Degree	Year(s)	Field of Study
High school (Abitur) in Halle/Saale (Germany)	Abitur	1983–1985	
Biomedical Faculty, Second Medical Institute Moscow (Russia)		1987–1991	Medical Biophysics
Humboldt Universität Berlin, Charité, Medical Faculty	M.D.	1991–1994	Medicine
Robert Koch-Institut and Freie Universität Berlin	Dr. med.	1994–1999	Medical Biophysics
City University New York, Hunter College (USA)	Postdoc	2000–2001	Biomedical Spectroscopy

B — Professional Employment

Nov 1994 – Dec 1999	<u>PhD thesis:</u> Robert Koch-Institut (RKI), Title of doctoral thesis: Image Segmentation of Human Tissue Thin Sections on the Basis of FT-IR Microspectroscopic Data
Jan 2000 – Feb 2001	<u>Postdoctoral position:</u> Hunter College, City University New York, Department of Chemistry and Biochemistry (Prof. M. Diem)
Mar 2001 – May 2011	<u>Research scientist:</u> RKI Berlin, P25 " <i>Biomedical Spectroscopy</i> "
Jun 2011 – present	<u>Head of division:</u> RKI Berlin, ZBS 6 " <i>Proteomics and Spectroscopy</i> "

C — Professional Interests / Activities

- Vibrational microspectroscopy and hyperspectral imaging of microorganisms, cells and tissues
- Characterization of pathogenic microorganisms using MALDI-TOF mass spectrometry and chemometrics
- Author of approx. 80 original research articles and book chapters, h-factor of 35 (Google Scholar), editor of the book "*Biomedical Vibrational Spectroscopy*" (ISBN: 978-0-470-22945-3, John Wiley & Sons, 2008)
- Author the software packages "*CytoSpec - Software for Hyperspectral Imaging*" and "*MicrobeMS - A Matlab Toolbox for Analysis of Microbial MALDI-TOF Mass Spectra*". Both programs are commercially available (see <http://www.cytospec.com> and <http://www.microbe-ms.com> for details).

D — Selected Publications (see <http://www.peter-lasch.de/Publist.pdf> for the complete list of publications)

1. Lasch P, Grunow R, Antonation K, Weller S, Jacob D. Inactivation techniques for MALDI-TOF MS analysis of highly pathogenic bacteria - A Critical Review. *Trends Anal Chem.* in press, available online 27 April 2016. <http://dx.doi.org/10.1016/j.trac.2016.04.012>
2. Dieckmann R, Hammerl JA, Hahmann H, ..., Al Dahouk S, Lasch P. Rapid characterisation of *Klebsiella oxytoca* isolates from contaminated liquid hand soap using mass spectrometry, FTIR and Raman spectroscopy. *Faraday Discuss.* 2016. 187: 353-75. <http://dx.doi.org/10.1039/C5FD00165J>
3. Lasch P, Wahab T, Weil S, ..., Jacob D. Identification of highly pathogenic microorganisms using MALDI-TOF mass spectrometry – results of an inter-laboratory ring trial. *J. Clin Microbiol.* 2015. 53(8): 2632-2640.
4. Lasch P, Naumann, D. Infrared spectroscopy in microbiology. *Encyclopedia of Analytical Chemistry.* 2015. <http://dx.doi.org/10.1002/9780470027318.a0117.pub2>. John Wiley & Sons, Ltd
5. Baker MJ, Trevisan J, Bassan P, Bhargava R, Butler H, Dorling KM, Fielden PR, Fogarty SW, Fullwood NJ, Heys K, Hughes C, Lasch P, et al. FT-IR Spectroscopy: From Biological Materials' Analyses Towards Imaging, Understanding Cell Functionality and Disease Diagnosis. *Nat Protoc.* 2014. 9(8):1771-91.